

## INTRODUCTION

The January 1996 issue of this journal included a substantial theoretical paper by Pauline J. Horne and C. Fergus Lowe on the development of a higher order behavioral unit (naming) and on the implications of this unit for understanding a range of important complex behavioral phenomena that would ordinarily be called linguistic or cognitive. Accompanying this paper was a collection of 26 commentaries followed by an authors' reply. At that time, in an introductory note, I indicated that we would consider publishing a second round of commentaries and reply, and I invited interested readers to contact Philip N. Heline, Review Editor, regarding prospects. The result is the following six commentaries and Horne and Lowe's reply, which, together with the collection of papers in the January 1996 issue, provide an extensive discussion of many important issues connected with work on these kinds of linguistic and cognitive phenomena.

Philip Heline served as action editor for the whole set of papers in both rounds, and I thought that he would have a unique and interesting perspective on the issues as a result of this experience. Accordingly, I urged him to prepare some comments that could mark the conclusion of this phase of the discussion, and he graciously agreed to do so. His essay is the last in this series.

Printed below is the abstract of Horne and Lowe's theoretical paper that appeared in the January 1996 issue.

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Editor

JOURNAL OF THE EXPERIMENTAL ANALYSIS OF BEHAVIOR 1996, 65, 185-241 NUMBER 1 (JANUARY)

### ON THE ORIGINS OF NAMING AND OTHER SYMBOLIC BEHAVIOR

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We identify *naming* as the basic unit of verbal behavior, describe the conditions under which it is learned, and outline its crucial role in the development of stimulus classes and, hence, of symbolic behavior. Drawing upon B. F. Skinner's functional analysis and the theoretical work of G. H. Mead and L. S. Vygotsky, we chart how a child, through learning listener behavior and then echoic responding, learns bidirectional relations between classes of objects or events and his or her own speaker-listener behavior, thus acquiring naming—a higher order behavioral relation. Once established, the bidirectionality incorporated in naming extends across behavior classes such as those identified by Skinner as the *mand*, *tact*, and *intraverbal* so that each becomes a variant of the name relation. We indicate how our account informs the specification of rule-governed behavior and provides the basis for an experimental analysis of symbolic behavior. Furthermore, because naming is both evoked by, and itself evokes, *classes* of events it brings about new or *emergent* behavior such as that reported in studies of stimulus equivalence. This account is supported by data from a wide range of match-to-sample studies that also provide evidence that stimulus equivalence in humans is not a unitary phenomenon but the outcome of a number of different types of naming behavior.

*Key words:* naming, verbal behavior, language, symbolic behavior, stimulus equivalence, listener behavior, rule governance, speech for self, consciousness, match to sample, children